



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE
OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION
FOR THE ADVANCEMENT OF SCIENCE.

FRIDAY, OCTOBER 30, 1908

CONTENTS

<i>The Geographical Distribution of the Student Body at a Number of Universities and Colleges:</i> PROFESSOR RUDOLF TOMBO, JR.	577
<i>The Dublin Meeting of the British Association:</i> DR. LEO FRANK GUTTMAN	585
<i>The Sixteenth International Congress of Americanists:</i> PROFESSOR FRANZ BOAS ...	597
<i>The Fourth International Fishery Congress..</i>	599
<i>Memorial Exercises in Honor of William F. Vilas</i>	601
<i>The Darwin Anniversary Meeting of the American Association</i>	602
<i>Scientific Notes and News</i>	603
<i>University and Educational News</i>	606
<i>Discussion and Correspondence:—</i>	
<i>The Teaching of Mathematics to Engineers:</i> PROFESSOR K. E. GUTHE. <i>Concerning the Real Unicorn:</i> PROFESSOR SPENCER TROTTER	607
<i>Scientific Books:—</i>	
<i>Penhallow on North American Gymnosperms:</i> PROFESSOR CHARLES E. BESSEY. <i>Royal Society Catalogue of Scientific Papers:</i> PROFESSOR G. A. MILLER	609
<i>Notes on Entomology:</i> DR. NATHAN BANKS	611
<i>Special Articles:—</i>	
<i>On a Communication between the Air-bladder and the Ear in Certain Spiny-rayed Fishes:</i> EDWIN CHAPIN STARKS. <i>A New Soil Sampler:</i> PROFESSOR W. H. STEVENSON. <i>Note on the Crystal Form of Benitoite:</i> PROFESSOR AUSTIN F. ROGERS	613

THE GEOGRAPHICAL DISTRIBUTION OF THE STUDENT BODY AT A NUMBER OF UNIVERSITIES AND COLLEGES

THE accompanying table explains the geographical distribution of the student body of thirteen American universities, six New England colleges for men, five colleges for women, two technological schools and one Pennsylvania college for men, for the academic year 1907–1908, the summer session students being in every instance omitted. *Missouri, Bowdoin, Massachusetts Institute of Technology, Purdue, Wesleyan, Bryn Mawr, Mount Holyoke, Smith, Vassar and Wellesley* have been added to the table. An effort has been made to group the institutions, instead of arranging them entirely in alphabetical order as heretofore.

Comparing the attendance by divisions of the six eastern universities (*Columbia, Cornell, Harvard, Pennsylvania, Princeton, Yale*) with the corresponding figures for the same universities in a similar table published in *SCIENCE* (N. S., Vol. XXVI., No. 656, July 26, 1907, pp. 97–104), we note in the first place that there has been a gain for these universities taken as a whole in every division, the largest increase in the actual number of students, leaving the North Atlantic division—in which all of these six universities are located—out of consideration, having been recorded in the North Central division, where there has been an increase of 117 students, this being exactly the same gain as was made last year. Foreign countries come next, as they did last year, with an increase of 92

MSS. intended for publication and books, etc., intended for review should be sent to the Editor of *SCIENCE*, Garrison-on-Hudson, N. Y.

(A) THE UNITED STATES

1907-1908	California	Columbia	Cornell	Harvard (including Radcliffe)	Illinois	Michigan	Missouri (including School of Mines)	Ohio State	Pennsylvania	Princeton	Virginia	Wisconsin	Yale	Amherst	Bowdoin	Brown	Dartmouth	Lehigh	Massachusetts Institute of Technology	Purdue	Wesleyan	Williams	Bryn Mawr	Mt. Holyoke	Smith	Vassar	Wellesley
North Atlantic Division.....	5	3404	2731	3426	50	560	41	77	3343	885	51	65	221	107	150	1019	11	1	1	1	1	1	1	1	1	1	877
Connecticut.....	1	67	58	55	1	9	2	5	41	13	2	2	1110	19	2	27	21	5	129	1	110	1	1	1	1	1	39
Maine.....	22	10	94	7	1	1	22	1	22	1	1	1	16	2	2	14	46	2	1	1	1	1	1	1	1	1	41
Massachusetts.....	1	73	100	2341	5	20	8	7	76	29	3	1	174	154	40	20	54	16	7	3	37	97	25	264	397	95	348
New Hampshire.....	1	11	8	79	2	5	1	2	11	3	1	1	15	2	10	40	247	1	1	2	2	1	1	1	1	1	37
New Jersey.....	413	190	60	2	10	1	2	298	266	10	8	117	22	25	11	52	17	14	41	41	17	46	101	73	82		
New York.....	2	2673	2025	519	23	326	23	31	168	282	20	33	640	158	5	58	99	56	82	41	60	179	59	131	302	333	160
Pennsylvania.....	1	122	323	165	13	163	5	23	2717	284	13	16	195	26	14	14	7	407	57	23	11	155	33	78	83	127	
Rhode Island.....	1	10	6	85	2	6	1	1	3	2	2	27	7	3	476	9	1	28	5	10	2	10	22	3	17	26	
Vermont.....	13	11	23	2	14	1	1	1	3	2	2	12	12	1	14	73	5	1	1	1	1	1	1	1	1	1	
South Atlantic Division.....	2	147	196	146	14	59	11	21	180	106	53	15	100	10	2	9	13	97	48	11	13	6	35	8	24	22	
Delaware.....	1	8	11	3	2	26	1	1	27	11	5	13	1	1	2	2	1	1	1	1	1	1	1	1	1	1	
District of Columbia.....	1	15	51	42	2	6	1	1	8	5	12	3	7	1	1	1	1	1	1	1	1	1	1	1	1	1	
Florida.....	1	30	10	18	3	3	1	2	16	3	13	3	11	3	2	2	2	1	1	1	1	1	1	1	1	1	
Georgia.....	1	16	68	27	1	4	1	4	44	42	27	4	9	2	3	2	54	18	2	3	19	1	10	2	5	3	
Maryland.....	1	27	12	12	1	3	1	11	5	20	1	1	12	1	1	1	1	1	1	1	1	1	1	1	1	1	
North Carolina.....	1	17	6	15	1	4	1	5	6	13	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
South Carolina.....	1	21	29	16	2	5	2	4	14	10	417	3	9	1	1	1	1	1	1	1	1	1	1	1	1	1	
Virginia.....	1	8	3	3	1	8	4	10	7	3	19	3	9	1	1	1	1	1	1	1	1	1	1	1	1	1	
West Virginia.....	1	11	96	95	59	82	95	21	62	48	140	17	97	6	1	1	1	1	1	1	1	1	1	1	1	1	
South Central Division.....	6	111	96	95	59	82	95	21	62	48	140	17	97	6	1	1	1	1	1	1	1	1	1	1	1	1	
Alabama.....	1	21	12	8	2	5	3	14	6	22	3	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	
Arkansas.....	1	20	14	25	14	34	12	7	12	16	45	5	10	1	1	1	1	1	1	1	1	1	1	1	1	1	
Kentucky.....	1	9	11	7	1	2	1	1	2	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Louisiana.....	3	9	11	6	4	1	3	2	4	3	14	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mississippi.....	1	4	4	3	9	18	29	1	1	1	1	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	
Oklahoma.....	1	19	12	19	7	4	9	5	7	10	27	14	2	2	1	1	1	1	1	1	1	1	1	1	1	1	
Texas.....	1	23	24	21	7	15	16	4	18	10	14	4	23	2	1	1	1	1	1	1	1	1	1	1	1	1	
Illinois.....	3	380	445	526	3765	3676	1999	2070	188	164	35	3365	679	72	3	18	190	14	142	1638	9	84	85	50	292	254	217
Indiana.....	3	44	34	42	109	190	7	17	19	21	3	32	30	1	3	4	1	12	1438	3	8	3	8	18	17	15	
Iowa.....	4	23	23	49	78	72	24	5	83	11	1	6	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
Kansas.....	1	17	13	16	27	36	28	3	11	1	1	6	14	1	1	1	1	1	1	1	1	1	1	1	1	1	
Michigan.....	3	33	30	31	30	2488	7	7	5	13	4	20	32	6	1	1	1	1	1	1	1	1	1	1	1	1	
Minnesota.....	4	31	20	34	19	24	1	2	11	12	1	26	46	3	1	1	1	1	1	1	1	1	1	1	1	1	
Missouri.....	3	34	23	59	39	73	1853	11	11	11	12	67	13	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nebraska.....	2	11	8	6	16	23	9	1	2	3	15	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	
North Dakota.....	1	11	5	4	1	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ohio.....	2	88	155	138	40	378	20	2021	56	36	8	19	171	16	4	21	3	26	115	4	13	14	9	52	58	47	
South Dakota.....	3	5	1	8	13	29	6	6	13	1	5	3	2889	15	2	2	2	1	12	11	1	8	7	2	18	28	9
Wisconsin.....	3	31	25	21	69	50	6	6	13	5	3	2889	15	2	2	2	2	1	12	11	1	8	7	2	18	28	9
Western Division.....	2499	181	91	138	48	203	45	10	39	29	19	53	115	14	1	5	23	6	48	25	9	11	2	48	29	49	
Arizona.....	3	4	1	1	3	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
California.....	2439	46	18	68	9	30	10	3	2	4	12	5	43	2	3	3	3	3	3	3	3	3	3	3	3	3	
Colorado.....	6	18	20	29	9	51	12	3	10	10	3	12	30	4	1	1	1	1	1	1	1	1	1	1	1	1	
Idaho.....	4	1	1	1	3	11	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Montana.....	1	14	7	3	3	33	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nevada.....	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New Mexico.....	2	1	1	5	3	5	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Oregon.....	26	7	19	7	3	22	2	1	3	4	1	3	4	1	3	4	1	1	1	1	1	1	1	1	1	1	
Utah.....	1	10	13	9	8	14	5	14	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Washington.....	13	18	9	12	7	20	1	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Wyoming.....	1	3	3	3	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Insular & Non-Contiguous Ter.	16	6	52	10	20	13	1	11	9	1	1	17	11	1	1	1	1	1	1	1	1	1	1	1	1	1	
Alaska.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Hawaiian Islands.....	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Philippine Islands.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Porto Rico.....	3	2	10	3	6	6	3	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total.....	2551	1169	3591	1341	3956	4593	2192	2210	3821	1233	779	3535	3217	501	300	615	1218	669	1330	1881	310	468	413	708	1470	997	1201

students, and the South Atlantic division follows with a gain of 86 students; then comes the western division with a gain of 41, and finally the South Central division with an increase of 36 students. The total increase in divisions outside of the North

Atlantic this year is much larger than last (381, against 189 in 1907 and 91 in 1906), and there has also been an increase in the gain of students from foreign countries, while last year a loss was noted (92, against 64 in 1907 and 87 in 1906). These

(B) FOREIGN COUNTRIES

	1907-1908																										
	California	Columbia	Cornell	Harvard (including Radcliffe)	Illinois	Michigan	Missouri (including School of Mines)	Ohio State	Pennsylvania	Princeton	Virginia	Wisconsin	Yale	Amherst	Bowdoin	Brown	Dartmouth	Lehigh	Massachusetts Institute of Technology	Purdue	Wesleyan	Williams	Bryn Mawr	Mt. Holyoke	Smith	Vassar	Wellesley
North America	8	59	37	60	10	31	19	8	58	6	1	17	26	1	1	4	1	19	28	10	2	2	4	1	2	4
Canada	6	39	12	47	4	22	1	.....	19	2	.....	10	20	1	1	2	1	1	9	2	2	.....	.....	.....	1	4
Central America .....	.....	3	4	3	.....	.....	.....	1	16	.....	.....	.....	1	.....	.....	.....	.....	1	3	1	.....	.....	.....	.....	.....	.....
Cuba .....	.....	12	14	4	.....	.....	.....	2	15	.....	.....	1	.....	.....	.....	1	.....	9	4	2	.....	.....	.....	.....	.....	.....
Mexico	2	4	7	4	5	7	18	3	.....	.....	1	.....	1	.....	.....	.....	.....	6	12	3	.....	.....	.....	.....	.....	.....
West Indies .....	.....	1	.....	2	1	2	.....	2	.....	.....	1	.....	1	.....	.....	1	.....	2	2	3	.....	.....	.....	1	.....	.....
South America	6	11	32	6	5	3	8	11	.....	1	1	.....	1	.....	.....	.....	.....	6	10	2	.....	.....	.....	.....	.....	1
Argentine Republic .....	.....	1	14	5	5	.....	4	10	8	.....	.....	1	.....	.....	.....	.....	.....	1	2	1	.....	.....	.....	.....	.....	1
Brazil .....	.....	4	7	.....	.....	1	.....	.....	15	1	.....	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1
British Guiana .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chile	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Colombia .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Ecuador	1	2	6	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	3	2	1	.....	.....	.....	.....	.....	.....
Paraguay .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Peru .....	.....	1	6	.....	.....	.....	2	.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	2	1	.....	.....	.....	.....	.....	.....
Uruguay .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Europe	6	48	19	28	8	16	4	9	50	4	.....	10	17	1	1	1	.....	17	1	2	2	2	1	.....	1	1
Austria-Hungary .....	.....	2	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belgium .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Bulgaria .....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denmark	1	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
France .....	.....	2	2	3	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Germany	3	9	.....	4	1	3	1	.....	5	.....	.....	5	2	1	.....	1	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Great Britain and Ireland	1	8	5	9	1	1	1	.....	12	4	.....	3	5	.....	1	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	1
Greece .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Holland .....	.....	1	1	.....	.....	4	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iceland .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Italy .....	.....	2	.....	3	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Norway .....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Portugal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rumania .....	.....	1	.....	1	.....	.....	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Russia	1	13	2	3	.....	3	1	5	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Spain .....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Sweden .....	.....	2	1	2	2	.....	.....	.....	4	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switzerland .....	.....	2	1	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turkey .....	.....	2	2	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Asia	36	53	51	40	18	13	5	17	25	9	2	16	42	7	1	1	.....	4	15	6	1	3	1	1	1	.....
Burmah .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ceylon .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
China	10	9	28	25	2	5	1	2	9	.....	1	4	25	.....	.....	1	.....	3	9	2	1	.....	.....	.....	.....	.....
Corea .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
India	14	3	11	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Japan	10	37	11	8	.....	.....	.....	.....	11	.....	.....	12	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Persia .....	.....	3	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siam	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Straits Settlements .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turkey .....	.....	1	1	2	4	.....	.....	1	4	3	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Africa .....	.....	1	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Egypt .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Africa .....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Australasia .....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Australia	2	1	3	3	.....	.....	1	1	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Caroline Islands .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Zealand .....	.....	.....	.....	1	.....	.....	1	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total (Foreign Countries)	58	173	143	142	41	64	39	46	216	20	4	45	89	9	3	6	1	29	80	20	5	7	6	3	2	3	
Total (United States)	2551	4169	3591	4341	3956	4593	2192	2210	3321	1233	779	3535	3217	504	300	915	1218	669	1330	1881	310	468	413	708	1470	1201	
Grand Total	2609	4342	3734	4483	3997	4657	2231	2256	4037	1253	783	3580	3306	513	303	921	1219	698	1410	1901	315	475	419	711	1472	1000	

figures contradict the statement often made that the large eastern universities are attracting fewer students from the west and south, the increase being especially noticeable in the North Central division. Calculated on a percentage basis, the total gain of the six universities in the North Atlantic

division during the past year amounted to 2.30 per cent., as against a gain of 8.16 per cent. outside of the division mentioned, the figures for 1906-7 being 3.51 per cent. and 5.73 per cent., respectively. In the South Atlantic division all of these institutions show a gain with the exception of

Yale; in the South Central States the exceptions are *Harvard* and *Princeton*; in the North Central division all of them with the exception of *Princeton* show gains, these being quite substantial in the case of *Columbia* and *Cornell*; in the far western states *Pennsylvania* and *Princeton* are the only institutions that show a loss, while all of them have made gains in foreign countries.

Comparing these figures with those of three years ago (1905), we observe that the most substantial gains have been made by *Columbia* (118), *Yale* (73) and *Cornell* (64) in the North Central division: by *Columbia* (39) in the South Central division, by *Yale* (37) in the Western division, by *Pennsylvania* (33), *Harvard* (32) and *Columbia* (29) in the South Atlantic division, and by *Pennsylvania* (90), *Columbia* (56), *Harvard* (48), and *Cornell* (43) in foreign countries. It may be of interest to note in passing that at *Columbia* the number of students in attendance from the North Atlantic division on the corporation only (not including Barnard College, Teachers College and the College of Pharmacy), exclusive of the summer session, has decreased by 6.80 per cent. since 1901-2.

Taking the universities in the accompanying table by divisions, we find that *Harvard* and *Columbia* continue to have the largest representation in the North Atlantic division, *Pennsylvania*, *Cornell*, *Yale* and *Princeton* following in the order named. *Michigan*'s representation has increased from 394 to 560 in three years, while the other western universities—*California*, *Illinois*, *Missouri*, *Ohio State* and *Wisconsin*—and the *University of Virginia*, attracted comparatively few students from this section of the country, *Ohio State* heading the latter list with 77 students, as against 64 last year. Every one of these western institutions, however, with the exception of *California*, shows gains in at-

tendance in this division over last year. *Harvard*, as usual, leads in all of the New England States, with the natural exception of Connecticut, where *Yale* has the largest following. *Columbia* and *Cornell*, as we should expect, have the largest representation in New York State, *Yale*, *Harvard*, *Michigan* and *Princeton* following in the order named, *Michigan*, which has registered an increase in this state from 195 to 326 in three years, having passed *Princeton* since last year. In New Jersey the order is *Columbia*, *Pennsylvania*, *Princeton*, *Cornell*, *Yale* and *Harvard*—*Pennsylvania* having passed *Princeton* in this state since last year. The *University of Pennsylvania* naturally leads in its own state, followed by *Cornell*, *Princeton*, *Yale*, *Harvard* and *Columbia*—*Princeton* having been passed by *Cornell* since last year.

Examining the attendance of the men's colleges and technological schools from these states, we note that the order for the entire division is *M. I. T.*, *Dartmouth*, *Brown*, *Lehigh*, *Amherst*, *Williams*, *Bowdoin*, *Wesleyan*—*Purdue* naturally bringing up the rear. Of course *Bowdoin* leads in Maine and *M. I. T.* in Massachusetts, with *Dartmouth* second in both instances, while the latter institution, as would be expected, has the largest number of students from New Hampshire and Vermont. *Brown* and *Harvard* are the only institutions that attract students from Rhode Island in any considerable number. In Connecticut *Wesleyan* naturally leads, followed by *M. I. T.*, *Brown*, *Dartmouth* and *Williams*, and *Amherst*, all of the eastern universities, except *Princeton*, having a larger representation in this state than any of the New England colleges for men outside of *Wesleyan* included in the table. Compared with 1906, all of the colleges included in both tables (*Amherst*, *Dartmouth*, *Lehigh* and *Williams*) show an increase in their representation from the

North Atlantic states, while compared with last year *Williams* shows a loss, as does *Brown*.

In New York State the order for the colleges is *Williams*, *Amherst*, *Dartmouth*, *M. I. T.*, *Wesleyan*, *Brown* and *Lehigh*. Of the four New England colleges included in both this and last year's tables, 30 per cent. of the students of *Amherst* as against 36 per cent. last year and 43 per cent. in 1906, have their permanent home in Massachusetts; 52 per cent. of *Brown's* student body, as against 53 per cent. in 1907, come from Rhode Island; 20 per cent. of *Dartmouth's* students, as against 21 per cent. last year and 24 per cent. in 1906 come from New Hampshire (26 per cent. as against 27 per cent. and 32 per cent., respectively, from New Hampshire and Vermont), and 20 per cent., as against 20 per cent. last year and 21 per cent. in 1906, of the student enrollment of *Williams* hail from Massachusetts. *Lehigh's* percentage of students from the state of Pennsylvania remains uniform at 58 per cent., as against 60 per cent. in 1906, while *Bowdoin* draws 77 per cent. of its student body from Maine, *M. I. T.* 55 per cent. from Massachusetts, and *Wesleyan* 35 per cent. from Connecticut. It is thus seen that of these institutions *Williams* and *Dartmouth* attract the largest percentage of students from outside their own state, followed by *Amherst*, *Wesleyan*, *Brown*, *M. I. T.*, *Lehigh*, *Purdue* and *Bowdoin*. *Dartmouth* attracts more students from Massachusetts than from all of the other states in the North Atlantic division combined. *Amherst* and *Williams* draw more from New York than from Massachusetts, while *Princeton* draws more from New York and from Pennsylvania than from New Jersey.

Of the eastern universities, *Pennsylvania* continues to have the largest percentage of enrollment from its own state, namely 67 per cent., the same percentage as in 1906;

of *Columbia's* student body 62 per cent. come from New York State, as against 66 per cent. in 1906; *Cornell's* percentage of New York students has dropped from 56 per cent. in 1906, to 54 per cent.; of *Harvard's* students 52 per cent., as against 54 per cent. in 1906, are residents of Massachusetts; of *Yale's* students 34 per cent., as against 33 per cent. in 1906, have their permanent residence in Connecticut, and, finally, of *Princeton's* students only 21 per cent., as against 20 per cent. in 1906, are residents of the state of New Jersey. The institutions in this group which exhibit a gain in the percentage of students from outside their own state during the past year are *Columbia*, *Cornell* and *Pennsylvania* (2 per cent. each) and *Harvard* (1 per cent.), *Princeton* and *Yale* having remained uniform.

Coming to the South Atlantic division and taking into consideration only the six eastern universities, we note that the order is exactly the same as it was two years ago, namely, *Cornell*, *Pennsylvania*, *Columbia*, *Harvard*, *Princeton*, *Yale*. The *University of Virginia* naturally has the largest following in this section; *Michigan* continues to be the only one of the western universities represented in the table to make a fair showing in these states, while *Lehigh* is the only one of the colleges with a good representation from this division, its main strength lying in the state of Maryland. So far as the individual states are concerned, *Pennsylvania* naturally leads in Delaware, *Cornell* in the District of Columbia, *Virginia* in Florida, *Columbia* in Georgia, North Carolina, and South Carolina, *Cornell* in Maryland, and *Virginia* in its own state (with *Cornell* second) and in West Virginia. The only change to be noted here since last year is the lead of *Cornell* instead of *Lehigh* in Maryland. Leaving the state of Virginia out of consideration, *Columbia*, *Cornell*, *Harvard*

and *Pennsylvania* have a larger clientele in the South Atlantic division than *Virginia*.

In the South Central division *Virginia* heads the list, followed by *Columbia* (111, as against 72 in 1905), *Yale* (97-80), *Cornell* (96-76), *Harvard* (95-80), *Michigan* (82-64), *Pennsylvania* (62-44), *Illinois* (59-47) and *Princeton* (48-72). *Purdue* attracts 84 students from this division, and *M. I. T.* 37. The New England colleges for men, and *Lehigh* and *California* have only a small following from this section (*Bowdoin* and *Williams* have not a single student from this division), while the girls' colleges make a far better showing, both *Vassar* and *Wellesley* drawing no less than 31 students each from the South Central States. *Columbia* has made the largest gain in this division, while *Princeton's* clientele shows a falling off. The largest representation from the individual states is found at the following universities: Alabama—*Virginia*, *Columbia*, *Pennsylvania*; Arkansas—*Missouri*, *Illinois*, *Virginia*; Kentucky—*Purdue*, *Virginia*, *Michigan*; Louisiana—*Yale*, *Cornell*, *Columbia*; Mississippi—*Virginia*, *Cornell*, *Columbia*; Oklahoma—*Missouri*, *Michigan*, *Illinois*; Tennessee—*Virginia*, *Columbia* and *Harvard*, and Texas—*Cornell*, *Columbia* and *Yale*. Kentucky continues to send by far the largest delegations to the institutions contained in the list, followed by Texas, Tennessee and Alabama.

In the North Central division the five universities and the technological school of that section, *Illinois*, *Michigan*, *Wisconsin*, *Ohio State*, *Missouri* and *Purdue*, in the order named, naturally have the largest clientele. Of these six institutions, *Michigan* draws the largest percentage of students from outside of its own state, 53 per cent. of its enrollment hailing from Michigan, the corresponding figure for *Purdue* being 76 per cent., for *Wisconsin* 81 per

cent., for *Missouri* 83 per cent., and for *Ohio State* 91 per cent. The clientele of the five middle western institutions last mentioned is, therefore, much more local in character than that of any of the eastern institutions comprised in the table, whereas *Michigan* attracts a larger percentage of students from outside of its own state than do *Pennsylvania*, *Columbia*, *Cornell*, *Lehigh*, or *M. I. T.* Of the eastern universities *Yale* still has the largest clientele in this section of the country, followed by *Harvard*, *Cornell*, *Columbia*, *Pennsylvania* and *Princeton*, the last named institution having been passed by *Pennsylvania* since last year. The largest gains in individual states (15 or more) during the past three years have been made by *Columbia* in Illinois, Ohio and Wisconsin, by *Cornell* in Ohio, by *Harvard* in Missouri, by *Pennsylvania* in Iowa, and by *Yale* in Missouri and Ohio. *Columbia's* representation in this group of states has grown from 262 to 380 in three years, *Cornell's* from 381 to 445, *Pennsylvania's* from 139 to 188, and *Yale's* from 506 to 579, while *Harvard's* has remained stationary at 526, and *Princeton's* has dropped from 209 to 164. Of the New England colleges for men, including *M. I. T.*, the last named institution has the largest following in the North Central division (142), with *Dartmouth* second (130), *Williams* third (84) and *Amherst* fourth (72), *Smith*, *Vassar* and *Wellesley* all drawing a much larger body of students from this section than the men's colleges, in fact, all three of these girls' colleges have a larger clientele from this division than either *Pennsylvania* or *Princeton*. The representation of *Amherst* in these states has grown from 43 to 72 in two years, that of *Dartmouth* from 91 to 130, while *Williams* shows a loss of two students. *Virginia* and *California* have only a small following in this division. Leaving the state institution out of consideration in

each case, *Michigan* is seen to have the largest following in Illinois, followed by *Wisconsin*, *Yale*, *Harvard* and *Cornell*, each of which has over one hundred students from this state. *Michigan* also leads in Indiana, followed by *Illinois*, *Columbia*, *Harvard*, *Cornell*. In Iowa the order is *Wisconsin*, *Illinois*, *Michigan*, *Harvard*, *Yale*; in Kansas—*Michigan*, *Missouri*, *Illinois*, *Columbia*, *Harvard*; in Michigan—*Columbia*, *Yale*, *Harvard* and *Vassar*, *Cornell* and *Illinois* and *Purdue*; in Minnesota—*Yale*, *Smith*, *Harvard*, *Columbia*, *Wisconsin*, *Michigan*; in Missouri—*Michigan*, *Yale*, *Harvard*, *Illinois*, *Columbia*; in Nebraska—*Michigan*, *Illinois*, *Wisconsin* and *Wellesley*, *Yale*, *Columbia*; in North Dakota—*Wisconsin*, *Columbia*, *Michigan*; in Ohio—*Michigan*, *Yale*, *Cornell*, *Harvard*, *Purdue*, *Columbia*; in South Dakota—*Michigan*, *Wisconsin*, *Illinois*; and in Wisconsin—*Illinois*, *Michigan*, *Columbia*, *Vassar*, *Cornell*, *Harvard*. Excluding in each case the respective state university, the state of Illinois is represented by 1,537 students at the institutions mentioned in the list, Ohio by 1,493, Michigan by 351, and Wisconsin by 348, that is, 58 per cent. of the state of Ohio's representatives at all of the institutions included in the table are enrolled at the state university, while the percentage for Illinois is 68 per cent., for Michigan 88 per cent., and for Wisconsin 89 per cent.

In the western division (leaving *California* out of consideration) *Michigan* continues in the lead, with *Harvard*, *Columbia* and *Yale*, each of which attracts over one hundred students from this section, following; then come *Cornell*, *Wisconsin*, *Wellesley*, *Illinois* and *M. I. T.* and *Smith*, *Missouri*, *Pennsylvania*, *Princeton* and *Vassar*, *Purdue*, *Dartmouth*, the remaining institutions drawing only a few students from the far western states. *Michigan's* representation has grown from 134 to 203 in three

years; *Harvard's* from 126 to 138; *Columbia's* from 111 to 121; *Yale's* from 78 to 115; *Cornell's* from 76 to 91; *Illinois'* from 41 to 48; *Pennsylvania's* from 22 to 39, while *Princeton's* has dropped from 41 to 29. *Michigan* leads in Arizona, Idaho and Wyoming; in California (leaving the state university out of consideration) *Harvard* continues to lead, with *Columbia*, *Yale* and *Michigan* following; in Colorado the order is *Michigan*, *Yale*, *Harvard*, *Cornell*; in Montana—*Michigan*, *Columbia*, *Wisconsin*; *California* leads in Nevada, the state which has the smallest total representation of any of the states; *Missouri* leads in New Mexico; in Oregon the order is *California*, *Michigan*, *Cornell*; in Utah—*Michigan* and *Pennsylvania*, *Cornell*, *Columbia*, and in Washington—*Michigan*, *Columbia*, *Yale*. Of the states in the western division Colorado and California continue to send by far the largest delegations to the eastern institutions in the list.

Cornell continues to lead in the number of students from the insular possessions, followed by *Illinois*. There were last year only seven representatives from Alaska at the institutions mentioned in the table. *California* leads in Hawaii, *Illinois* in the Philippines, and *Cornell* in Porto Rico. Taking only the institutions included in the tables both this year and last year, there has been an increase of one student from Hawaii, of fourteen from the Philippines and of five from Porto Rico.

Taking only the six eastern universities, the table shows that *Columbia* leads or is tied for first place in seventeen states and territories, *Yale* in fourteen, *Harvard* in twelve, *Cornell* in ten, *Pennsylvania* in four, and *Princeton* in none, as follows: *Columbia*—New Jersey, New York, Georgia, North Carolina, South Carolina, Alabama, Tennessee, Indiana, Kansas, Michigan, North Dakota, Wisconsin, Arizona, Montana, Nevada, Washington and

Alaska; *Yale*—Connecticut, Florida, West Virginia, Kentucky, Louisiana, Oklahoma, Illinois, Minnesota, Missouri, Nebraska, Ohio, Colorado, Idaho and Alaska; *Harvard*—Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Tennessee, Iowa, South Dakota, California, New Mexico, Wyoming and Hawaii; *Cornell*—District of Columbia, Maryland, Virginia, Arkansas, Mississippi, Texas, Oregon, Wyoming, Philippine Islands and Porto Rico; *Pennsylvania*—Pennsylvania, Delaware, Idaho and Utah.

The total number of students from foreign countries in attendance at the institutions represented in the accompanying table as well as in that of last year has grown from 946 to 1088, an increase of no less than 15 per cent., to which the various continents contributed as follows: North America's representation has grown from 314 to 348; South America's from 103 to 122; Europe's from 200 to 219; Asia's from 272 to 332, and Australasia's from 45 to 58, while Africa's has dropped from 12 to 9. Asia exhibits the largest increase, as it did last year.

Pennsylvania continues to have the largest foreign clientele, followed by *Columbia*, *Cornell* and *Harvard*, each of which attracts over one hundred foreigners. Of the western institutions *Michigan* is still in the lead, followed by *California*, *Ohio State*, *Wisconsin*, *Illinois* and *Missouri*. *Virginia*, the New England colleges for men, and the colleges for women attract only a few students resident in foreign countries, while *M. I. T.*, *Lehigh* and *Purdue*, especially the first, all have a fair representation.

Examining the foreign delegations of the different institutions by continents, we note that the order in North America is *Harvard*, *Columbia*, *Pennsylvania*, *Cornell*, *Michigan*, *M. I. T.*, *Yale*; in South America—*Pennsylvania*, *Cornell*, *Columbia* and

Ohio, *M. I. T.*; in Europe—*Pennsylvania*, *Columbia*, *Harvard*, *Cornell*, *M. I. T.* and *Yale*, *Michigan*; in Asia—*Columbia*, *Cornell*, *Yale*, *Harvard*, *California*, *Pennsylvania*; in Africa *M. I. T.* leads, while in Australasia *Pennsylvania* continues to be the only institution with a good representation. Of the countries that send at least eight students to any one institution *Harvard* leads in Canada; *Pennsylvania* in Central America, Cuba, Brazil, Colombia, Great Britain and Ireland, Holland, Australia and New Zealand; *Missouri* in Mexico; *Cornell* in the Argentine Republic and China; *Columbia* in Germany, Russia and Japan; *California* in India.

Taking the representation of foreigners at all of the institutions mentioned in the list, we find that the largest delegations are sent by the following countries: Canada, 210; Japan, 142; China, 139; Mexico, 90; Cuba, 67; Great Britain and Ireland, 60; Argentine Republic, 56; and India 54. As for individual countries in America, the order for Canada is *Harvard*, *Columbia*, *Michigan*, *Yale*, *Pennsylvania*; *Pennsylvania* continues to have the best Central American representation, and also leads in Cuba, with *Cornell* second and *Columbia* third; *Missouri* leads in Mexico, with *M. I. T.* second, and *Purdue* in the West Indies, although the representation from these islands is very small. Of the South American countries the Argentine Republic sends the largest delegation, followed by Brazil.

In the European countries that send eight or more students to any one institution the order is as follows: Germany—*Columbia*, *Pennsylvania* and *Wisconsin*; Great Britain and Ireland—*Pennsylvania*, *Harvard*, *Columbia*; Holland—*Pennsylvania*, *Michigan*; Russia—*Columbia*, *Pennsylvania*, *Ohio State*. England sends the largest number, namely 60, followed by Russia with 40 and Germany with 32. Of

the Asiatic countries, counting only the institutions represented in last year's table, Japan sends 131, China 124 and India 49, as against 116, 84 and 39, respectively, last year. *Cornell* draws the largest number of students from China, followed by *Harvard* and *Yale*; *Columbia* draws more than twice as many students from Japan as the second institution, *Yale*, while *California*, as we have seen, leads in India.

The figures given in the table are intended to represent *not* the birthplace of the students, but their permanent residence, although the absolute accuracy of the table is somewhat impaired by the fact that students occasionally give as their permanent residence the state where the institution at which they are enrolled is located, this being especially true of the state universities, where students take up a temporary residence in the state to escape tuition fees.

RUDOLF TOMBO, JR.

COLUMBIA UNIVERSITY

THE DUBLIN MEETING OF THE BRITISH
ASSOCIATION, SEPTEMBER 2-9, 1908

THE meeting proved to be one of the best attended and most successful ever held by the British Association for the Advancement of Science. A total of 2,270 tickets were issued, of which 1,152 belonged to the class of associate members.

The first day, Wednesday, was devoted to registration, the president's address being delivered in the evening in the graduation hall of the university. Owing to the terrific storm that had been raging on the British coasts the previous three days, most members put off crossing the Irish channel as late as possible, but even Wednesday afternoon's crossing was slightly rough. Work in the various sections started on Thursday, September 3. Nearly all the sections were housed in the grounds of Trinity College, and an inter-sectional auto-

mobile service, arranged through the generosity of local members, provided swift means for reaching outlying meeting places. The usual post-office information bureau, news stand, excursion counter, and lounge were located in the examination hall, and the daily journal gave prompt information as to the doings of the sections. A welcome and most efficient innovation were the "indicator boards," announcing what papers were being read in each section. The boards contained the letters A to L, representing the various sections, and underneath each letter was hung a card bearing the number of the paper under discussion at the moment. The "indicator boards" were kept up to date by four special operators for each section, telephonic communication proving very helpful. The number of abstracts of the papers read supplied to members proved for once adequate to the demand.

Thursday was ushered in by heavy rains, which marred the success of the Provost's garden party in the afternoon, held in the Fellows' garden. The party was well attended, however, and afforded the usual enjoyable opportunity for meeting old friends whilst listening to the music of the band and taking tea in the marquees.

Guinness's brewery was visited by parties of members on several days, and other works in the vicinity were also thrown open for inspection. A very interesting series of Irish plays was being given at the Abbey theater, and the many who went there enjoyed the novel, excellent and characteristic acting in the native plays. A record crowd attended the *conversazione* given by the Royal Dublin Society in the evening at Leinster House. Most of the members (about 3,000) of the society attended with friends, and their number was swelled by about 1,500 British Association members. The large house, together with the beautiful rooms in which are placed the collections